REMARKS

Claims 1, 3-27, 46, 48-71 and 73 were pending in the present application. Claims 18-27, 46 and 48-58 were withdrawn in view of a restriction requirement earlier presented. The pending claims and withdrawn claims have been canceled without prejudice to or disclaimer of the subject matter contained therein and without prejudice to Applicants' right to file a divisional or continuation application directed to unelected or other subject matter. New claims 74-133 are presented herein directed to the elected invention of compositions (*see, Office Action mailed January 14, 2003*). Support for the new claims may be found in the originally filed claims and the specification, at least on pages 5, 10, 11, 13, 14, 15, 17 and 25. No new matter was added.

Reexamination of the application and reconsideration of the rejections in the final Office Action mailed July 21, 2005, are respectfully requested in view of the above amendments, the attached Declaration Under 35 U.S.C. § 1.132, and the following remarks.

Rejection 1 under 35 U.S.C. § 103(a)

Claims 1, 3-16, 59-71 and 73 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark et al., U.S. Patent No. 5,981,621, in view of Kronenthal et al, U.S. Patent No. 3,995,641, Hammerslag, U.S. Patent No. 6,386,203 and EP 965623. Applicants respectfully submit that this rejection is moot with regard to the canceled claims and that the new claims are not anticipated or obvious over the cited art. In view thereof, Applicants respectfully request that this rejection be withdrawn.

New independent claim 74 is directed to a biocompatible adhesive composition comprising a first monomer species comprising an alkyl ester cyanoacrylate, a second monomer species different from the first monomer species comprising an alkyl α-cyanoacrylate, and a polymerization initiator or accelerator. The first and second monomer species have different polymer absorption rates and the biocompatible adhesive composition has a third polymer absorption rate different than the polymer absorption rates of the monomer species.

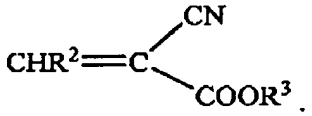
New independent claim 103 is directed to a biocompatible adhesive composition comprising a first monomer species comprising an alkyl ester cyanoacrylate, a second monomer species different from the first monomer species comprising an alkyl ether cyanoacrylate having a particular formula and a polymerization initiator or accelerator,

wherein the first monomer species has a first polymer absorption rate and the second monomer species has a second polymer absorption rate different from the first polymer absorption rate and the biocompatible adhesive composition has a third polymer absorption rate different from the first and second polymer absorption rates.

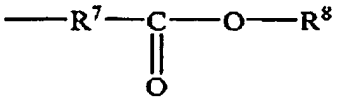
New independent claim 118 is directed to a biocompatible adhesive composition comprising a first monomer species comprising an alkyl ether cyanoacrylate having a particular formula, a second monomer species different from the first monomer species comprising an alkyl α-cyanoacrylate, and a polymerization initiator or accelerator, wherein the first monomer species has a first polymer absorption rate and the second monomer species has a second polymer absorption rate different from the first polymer absorption rate and the biocompatible adhesive composition has a third polymer absorption rate different from the first and second polymer absorption rates.

The mixture of at least two different monomer species where the different monomer species have different polymer absorption rates allows for adjustment and tailoring of the degradation rate of the resultant formed polymer. *Specification, page 4, lines 5-13.* The selection of monomer will affect the absorption rate of the resultant polymer, as well as the polymerization rate of the monomer. Two or more different monomers that have varied absorption and/or polymerization rates may be used in combination to give a greater degree of control over the absorption rate of the resultant polymer, as well as the polymerization rate of the monomer. The selection of the monomer and initiator as taught in the specification provide control within relatively narrow and predictable ranges for both the polymerization and absorption rates. *Specification, page 10, lines 7-14.*

Clark et al. discloses a wound closure monomer composition comprising (A) at least one monomer, which forms a medically acceptable wound closure polymer, (B) at least one plasticizing agent, and (C) at least one acidic stabilizing agent. *Column 2, line 64-column 3, line 2.* Clark et al. discloses that preferred monomers have the formula



As disclosed, R^2 is hydrogen and R^3 may be, among other things, a group having the formula



wherein R^7 is

$-CH_2-$, , or $-C(CH_3)_2-$, and

R^8 is an organic radical. *Column 4, lines 7-35.* Claim 10 of Clark et al. recites a composition of claim 1 wherein the composition comprises at least two different monomers. Clark et al. also discloses that initiators that initiate polymerization and/or cross-linking of the material may be applied to a surface portion or to the entire surface of the applicator tip, including the interior and the exterior of the tip, and that the suitable initiators include cationic surfactants such as benzalkonium chloride. *Column 11, lines 18-67.*

Kronenthal et al. discloses carbalkoxyalkyl 2-cyanoacrylates. *Abstract.* As pointed out in the present specification, Kronenthal et al. does not discuss the use of initiators, but rather indicates that blood and other body fluids polymerize the monomers. The disclosure of Kronenthal et al. also does not address the effect of the selection of initiators on the properties possessed by cyanoacrylates or polymerization products thereof. *Specification, page 2, lines 23-27.*

Hammerslag discloses methods and compositions for closing and sealing a wound, laceration, incision, or other percutaneous opening using an adhesive. Preferred sealing media comprise cyanoacrylates combined with fumed silica. *Abstract.*

EP 0965623 discloses an adhesive composition including a polymerizable adhesive monomer, at least one vapor phase stabilizer, and at least one liquid phase stabilizer. *Abstract.*

As set forth in the specification and described in the attached Declaration Under 35 U.S.C. § 1.132, the selection of monomer and initiator as taught in the specification allows for monomers with greatly varying polymerization rates to be used together and still result in a single polymeric adhesive upon polymerization of the first and second monomers with the initiator or accelerator. *Declaration Under 37 C.F.R. § 1.132, paragraph 4.* None of the cited art, taken alone or together teaches or suggests that a particular selection of monomer species with an initiator or accelerator should be used in order to obtain an adhesive as claimed. Specifically, the cited art, taken together, does not suggest and would not have motivated one of skill in the art to use a first and second monomer species as claimed having different polymer absorption rates to obtain a biocompatible adhesive composition which has a third polymer absorption rate different than the polymer absorption rates of the monomer

species. The combination thus claimed, however, results in an adhesive composition wherein the monomers polymerize together to form one polymer with a third absorption rate rather than polymerizing into two different polymers. *Declaration Under 35 U.S.C. § 1.132, paragraph 4.*

The cited art does not discuss or even acknowledge the problem of selecting cyanoacrylate monomer species with different absorption rates and initiators for use therefore such that polymerization of the combination will provide an adhesive composition with an absorption rate different from either of the monomers. The selection of particular cyanoacrylate monomer species with an initiator or accelerator to obtain a polymer or adhesive composition is not disclosed or suggested. *See, specification, page 13, lines 26-31 and Declaration Under 35 U.S.C. § 1.132, paragraph 3.*

None of the cited art, alone or in combination, discloses or suggests a biocompatible adhesive composition as claimed or the problem or the solution to obtaining a biocompatible adhesive composition with an absorption rate as claimed when monomer species with differing polymer absorption rates are present. In view thereof, Applicants believe the invention as defined in the claims as presented would not have been obvious to one of skill in the art and respectfully request that this rejection be withdrawn.

Rejection 2 Under 35 U.S.C. § 103(a)

Claims 1, 3-16, 59-71 and 73 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark et al., in view of Kronenthal et al., Hammerslag and EP 965623, in further view of Banitt et al., U.S. Patent No. 3,559,652 and Collins et al. Applicants respectfully traverse this rejection. Applicants respectfully submit that this rejection is moot with regard to the canceled claims and that the new claims are unobvious over the cited art. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Clark et al., Kronenthal et al., Hammerslag and EP 965623 are discussed above. Banitt et al. is cited by the Examiner for teaching that alkoxyalkyl 2-cyanoacrylates are biodegradable and have minimal toxicity. *Office Action, p. 6.* Collins et al. is cited by the Examiner for allegedly teaching that alkyl cyanoacrylates such as octyl 2-cyanoacrylate are more effective tissue adhesives but that the higher homologues do not biodegrade as rapidly, and that the combination of effectiveness in hemostasis inducing ability of the higher homologues and rapid biodegradation of the methyl monomer would be highly desirable in a tissue adhesive. *Office Action, p. 6.* However, neither Banitt et al. nor Collins et al., alone or

in combination with the other cited patents, teach or suggest combining a first monomer species and second monomer species as claimed with an initiator or accelerator to obtain a biocompatible adhesive composition having a polymer absorption rate different from the polymer absorption rates of the cyanoacrylate monomer species.

In view of the foregoing, Applicants believe the invention as defined in the claims as presented would not have been obvious to one of skill in the art and respectfully request that this rejection be withdrawn.

Rejection 3 Under 35 U.S.C. § 103(a)

Claims 1, 3, 4, 8, 9, 11, 12, 14, 59-62, 64, 66-71 and 73 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Berger et al., U.S. Patent No. 5,998,472, in view of Kronenthal et al., Hammerslag and Clark et al. Applicants respectfully traverse this rejection. Applicants respectfully submit that this rejection is moot with regard to the canceled claims and that the new claims are unobvious over the cited art. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Berger et al. discloses that the addition of a C_{10}-C_{12} alkyl cyanoacrylate ester to a C_1 to C_8 alkyl cyanoacrylate ester provides for a composition which forms a flexible cyanoacrylate polymer on mammalian skin without the need to add a plasticizer. *Column 2, lines 62-67.* Berger et al. also discloses the following:

> ... it is contemplated that the flexibility of polymeric films formed on mammalian skin from cyanoacrylate esters can be improved by the addition of a effective amount of a C_{10} to C_{12} cyanoacrylate ester wherein such cyanoacrylate esters are represented by the formula
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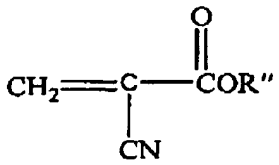
> 
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> wherein R" is alkenyl of 2 to 10 carbon atoms, cycloalkyl groups of from 5 to 8 carbon atoms, phenyl, 2-ethoxyethyl, 3-methoxybutyl, or a substituent of the formula:
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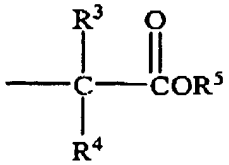
> 
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> wherein R^3 and R^4 are independently selected from the group consisting of hydrogen and methyl, and R^5 is selected from the group consisting of alkyl of from 1 to 6 carbon atoms, alkenyl of from 2 to 6 carbon atoms, alkynyl of

from 2 to 6 carbon atoms, cycloalkyl of from 3 to 8 carbon atoms, aralkyl selected from the group consisting of benzyl, methylbenzyl and phenylethyl, phenyl, and phenyl substituted with 1 to 3 substituents selected from the group consisting of hydroxy, chloro, bromo, nitro, alkyl of 1 to 4 carbon atoms, and alkoxy of from 1 to 4 carbon atoms.

Column 10, line 53-column 11, line 18.

Kronenthal et al., Hammerslag and Clark et al. are discussed above. None of the cited art, alone or in combination, discloses or suggests the combinations of monomers species as claimed in new claims 74, 103 and 118, particularly in combination with an initiator or accelerator, and resulting in a biocompatible adhesive composition with a polymer absorption rate different from either of the polymer absorption rates of the monomer species. In view thereof, Applicants believe the invention as defined in the claims as presented would not have been obvious to one of skill in the art and respectfully request that this rejection be withdrawn.

For the foregoing reasons, claims 74-133 are considered allowable. A Notice to this effect is respectfully requested. If any questions remain, the Examiner is invited to contact the undersigned at the number given below.

Respectfully submitted,

HUTCHISON & MASON PLLC

Date: 12/20/05

By: Mary B. Grant
Mary B. Grant
Registration No. 32,176

P.O. Box 31686
Raleigh, NC 27612
+1.919.829.9600

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Jennie Snead
(Typed Name of Person Signing Certificate)

(Signature of Person Signing Certificate)

Date of Signing: 12/20/05